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Our ref: 681181-R1(0)

6th February 2024

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Worton Farms
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OX29 4SU

PRELIMINARY FLOOD RISK AND DRAINAGE APPRAISAL WITH RESPECT TO PROPOSED NEW SOLAR FARM DEVELOPMENT ON ADJACENT LAND

SITE: WORTON PARK, CASSINGTON, OXFORDSHIRE, OX29 4SU

1. Introduction

RSK Land and Development Engineering Ltd were commissioned by Worton Farms (the client) to investigate a site at Worton Park (site address above) in relation to existing observed flooding issues emanating from land to the north, and also provide an initial appraisal regarding the potential impacts for the subject site of a proposed solar farm development on land to the north.

2. Background

A site visit to investigate the existing drainage arrangements, the potential source of offsite flooding and also to discuss the wider context of the drainage pathways in the area was undertaken on the morning of Monday 15th January 2024.

During the walkover, overhead conditions were dry and bright, however, December 2023 and early January 2024 had been characterised by regular periods of heavy rainfall, culminating in widespread localised and national flooding, as reported in the local and national media. Pictures included and referenced in this report were taken during this period (late December 2023 and early January 2024) by the Worton Park site team.

3. Site Description

The Worton Park site is located at Ordnance Survey (OS) Grid Reference 446353E 211407N (located centrally within the site) and currently comprises a complex of agricultural, commercial and residential premises, with associated access roads, areas of car parking and soft landscaping.

The site is accessed from the northwest via a main vehicular access from Yarnton Road. A secondary access is located to the northeast, also linking the site to the Yarnton Road.

The site is surrounded by agricultural land to the west, north and east, and to the south by a thin strip of woodland that separates the site from a lake that is a former gravel extraction pit.

A site location plan, detailing the current configuration of the buildings, is included in **Figure 1**. The main site access and Yarnton Road (to the north of the continuous blue line) are within highways ownership.

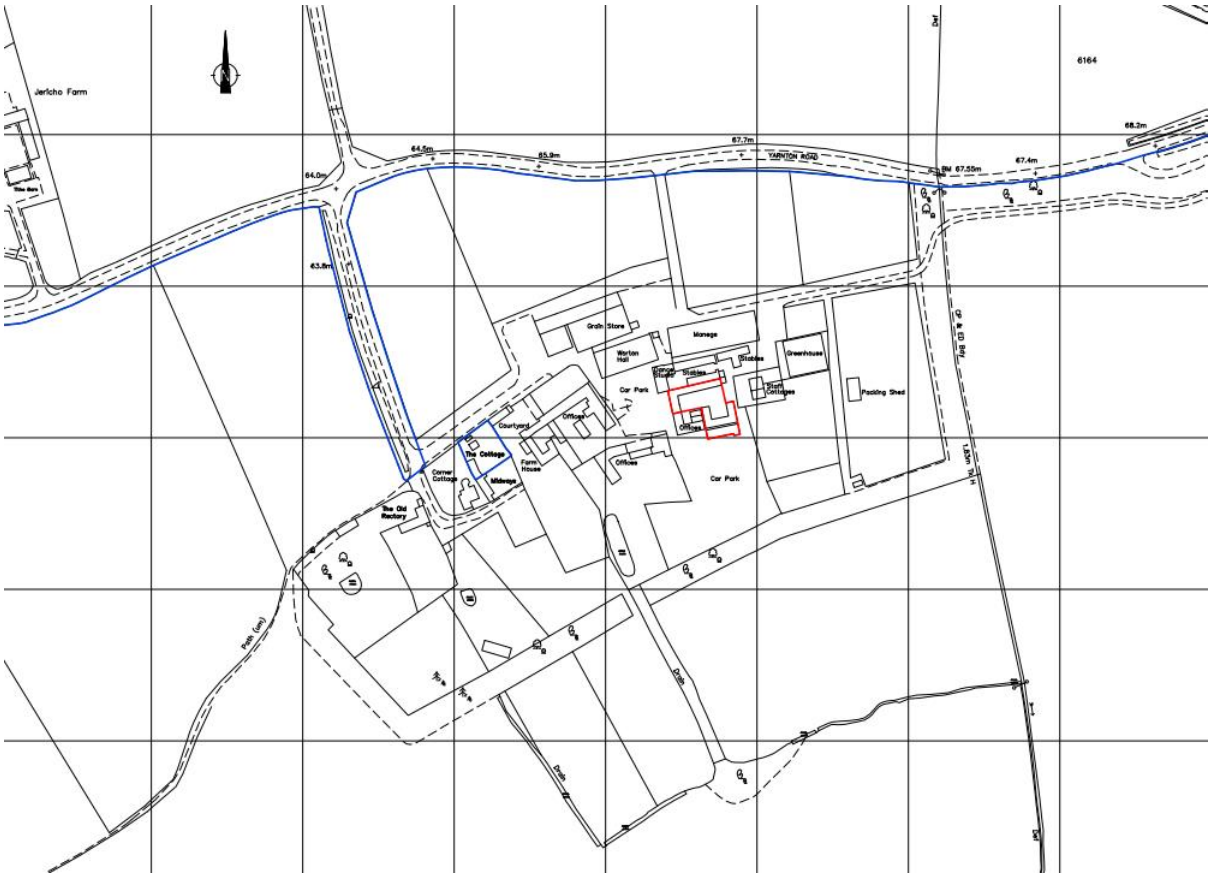

Figure 1: Site Location and Layout Plan

4. Site Hydrology and Drainage

4.1 Hydrology

The localised hydrology is characterised by a general shallow topographic fall from north to south in the wider area. To the north of Yarnton Road, an unnamed ordinary watercourse flows north to south parallel and immediately east of the access road to the Thames Water Cassington Sewage Treatment Works. This watercourse is culverted beneath the Thames Water access road, before emerging into a small section of open channel to the west of the southern extent of the Thames Water access, before being culverted again beneath Yarnton Road and flowing in an open channel in an east to west direction.

During heavy and prolonged rainfall, the culverts running beneath the access track to the Thames Water site and Yarnton Road, surcharge causing surface water runoff to flow across Yarnton Road and down the main site access to Worton Park. This observed flooding is illustrated in **Figure 3**, that shows the junction of the Worton Park access road, Yarnton Road and Thames Water access road, and also in **Figure 4**, that illustrates the flow path to the south along the Worton Park access.

The ordinary watercourse, culverts and observed surface water flow pathways are illustrated on **Figure 2.**

Figure 2: Local watercourses, culverts and observed surface water flow paths

The flows from north to south down the access road to Worton Park have been significant (**Figure 4**), so much so that mitigation in the form of a culvert underneath a large perimeter wall has been constructed to enable continued passage of water into the ditch network to the south of the site. This structure is pictured in **Figure 5**.

Beyond the culvert, flows are channelled into a perimeter ditch that diverts surface water flows around the residential property into the ditch network to the south of the Worton Park site.

4.2 Surface Water Drainage

Surface water drainage within the Worton Park site itself, is generally channelled via a series of drainage channels, pipes and holding tanks into the watercourse network and lakes to the south of the site. Surface water flows from the watercourse catchment to the north, as described above, are limited to the main site access, as the access road is set at a higher level once it turns to the east to access the main site and commercial properties to the east.

4.3 Geology and Hydrogeology

Based on published geological records for the area (British Geological Survey online mapping), the site exhibits the following geology:

- Superficial Geology: Alluvium (southern site area) and Summertown Radley Sand and Gravel (northwest of site including access road).
- Bedrock Geology: Oxford Clay Formation.

Hydrogeological information was obtained from the online Magic Maps service. These maps indicate that the site is underlain by a Secondary A superficial aquifer relating to the Alluvium and Sand and Gravel. The underlying Clay is classified as an Unproductive Stratum. There are no groundwater Source Protection Zones (SPZs) close to the site.

Figure 3: Worton Park Access flooding, showing Yarnton Road and Thames Water Access

[redacted]
Abbey Park, Humber Road, Coventry CV3 4AQ UK
Tel [redacted]
Email: [redacted]

Figure 4: Worton Park access road flooding (looking south)

Figure 5: Worton Park access road flooding (looking south towards southern most residential property with culvert beneath wall visible

5. Baseline Flood Risk Assessment

5.1 Fluvial Flood Risk

The Gov.uk online Flood Map for Planning, reproduced in **Figure 6**, illustrates that the vast majority of the Worton Park site is located in Flood Zone 1, with areas of Flood Zone 2 located beyond the southern site boundary, which in certain areas, seem to encroach slightly into the wider site. Site specific flood data was obtained from the Environment Agency (EA), which confirms that the extent of flooding

associated with any extreme main river flood events is limited to the extreme southern site area. The EA data is included in **Appendix A**.

Figure 6: Environment Agency (Gov.uk) Flood Map for Planning

The fluvial flood risk to the site is considered **low**, although in extreme fluvial flood events, the risk to the southern site boundary is considered medium. It is, however, worth noting that smaller catchments and ordinary watercourses are not always considered by these maps, hence, in the absence of any flood modelling for the ordinary watercourse catchment in which the site is located, it is advisable to use the surface water flood risk map as a first point of reference, as discussed in **Section 5.3**.

5.2 Tidal Flood Risk

The site is located significantly upstream of the tidal limit of the River Thames. The overall tidal flood risk is considered to be **negligible**.

5.3 Surface Water (Pluvial) Flood Risk

Review of the EA's latest Risk of Flooding from Surface Water mapping, as illustrated in **Figure 7**, confirms that the majority of the site is at a **very low** risk of surface water flooding, however, the site access road and several topographical low spots within the site boundary are at a **medium** to **high** risk of surface water flooding.

The area of high risk flooding running north to south along the site access road, correlates to the out of bank flow route from the ordinary watercourse to the north of Yarnton Road, as described in **Section 4.1**.

Figure 7: Environment Agency (Gov.uk) Surface Water Flood Map

5.4 Groundwater Flood Risk

The underlying alluvial and sand and gravel deposits may contain shallow groundwater, particularly in areas to the south of the site in the vicinity of the former gravel pits. The risk of groundwater being at surface and potentially causing a flood risk to property, is considered **low**, however, there may be a higher risk to any existing buildings on site with basement structures.

5.5 Sewer Flood Risk

A detailed appraisal of the surrounding sewer network has not been undertaken as part of this preliminary assessment. Anecdotal evidence suggests that an outfall running from the Cassington Sewage Treatment Works runs to the west of the site and outfalls into the watercourse network to the southwest, however, sewer records have not been obtained as part of this preliminary assessment.

The onsite private foul water network discharges into a treatment system located adjacent to the southern site boundary with an overflow into the boundary ditch located on the southern site boundary.

Any flooding associated with faulty or blocked sewers would likely be minor and relatively localised in extent, hence the risk associated with sewer flooding is assessed as **low**.

5.6 Reservoir Flood Risk

Reference to the Gov.uk reservoir flood risk mapping illustrates that the site does not lie within an area that is at risk from reservoir flooding. Hence the risk of flooding associated with reservoirs is assessed as **very low**.

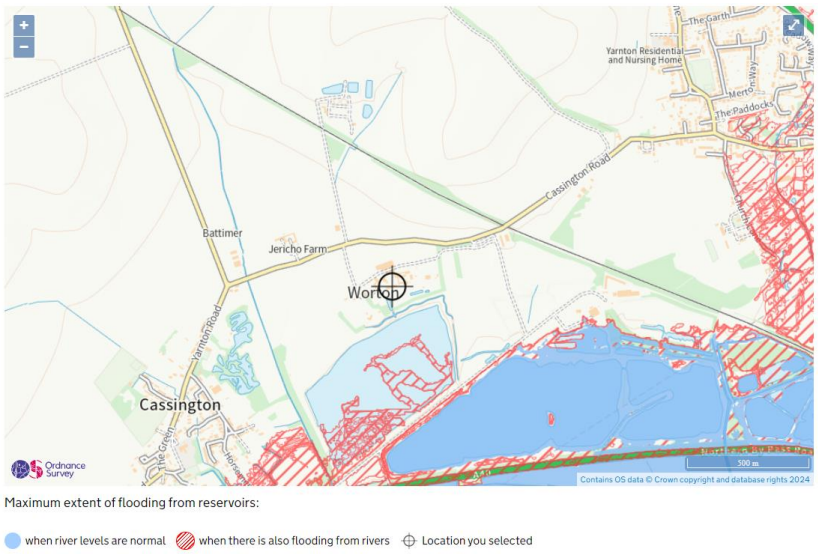

Figure 8: Environment Agency (Gov.uk) Reservoir Flood Map

5.7 Other Sources of Flood Risk

There are no Canal & River Trust owned canals within the vicinity of the site.

No other artificial features with the potential to result in a flood risk to the site have been identified.

6. The Proposed Botley West Solar Farm

6.1 Scheme Proposals and Hydrological Spatial Context

Photovolt Development Partners is proposing Botley West Solar Farm, a new solar farm in the west of Oxfordshire. A proportion of the central area of the proposed solar farm site is located on land to the north of the Yarnton Road as illustrated by the map extract in **Figure 9** (taken from the Botley West Solar Farm website).

The large arable field immediately north east of the Worton Park access road and north of Yarnton Road is earmarked for solar development, along with several other fields surrounding the Cassington

Sewage Treatment Works. These land parcels are located in the immediate upstream sub-catchment that flows towards the Worton Park site, as described in **Section 4.1**.

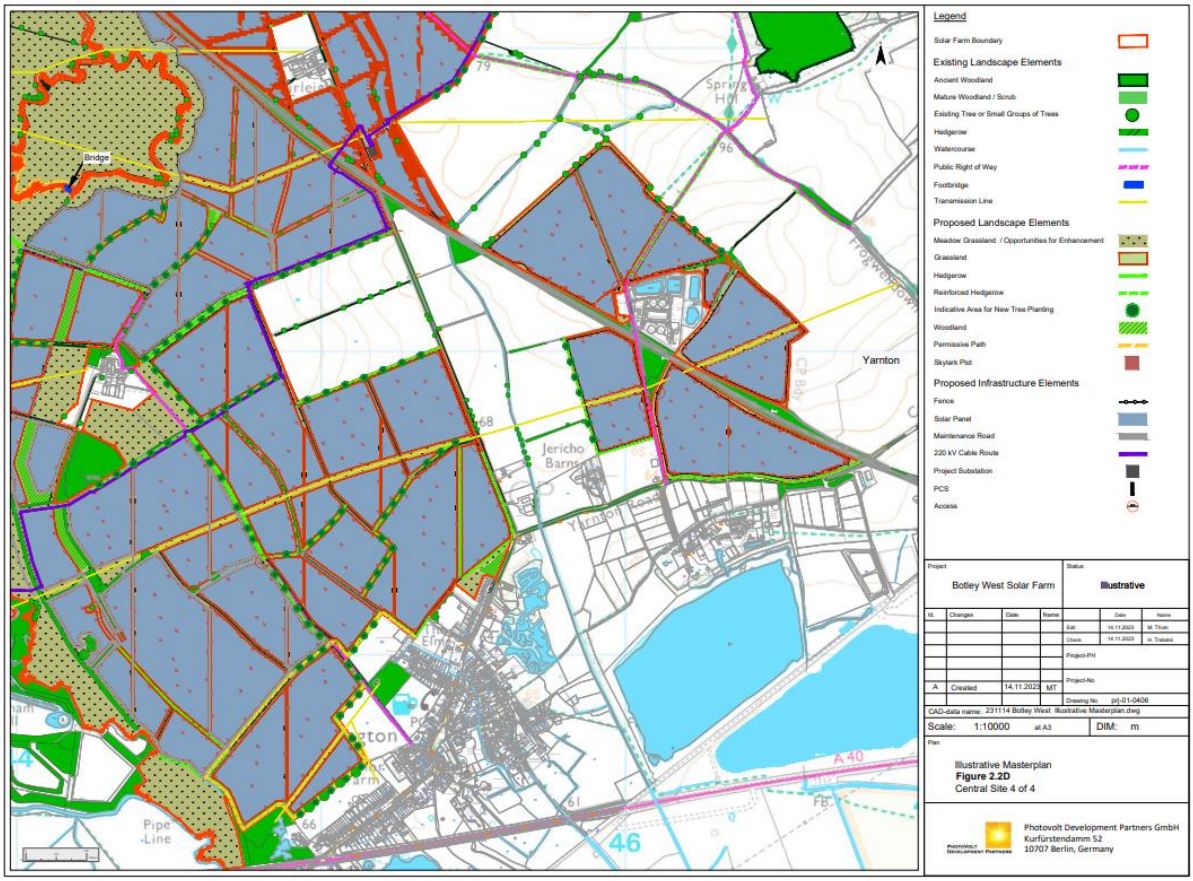

Figure 9: Botley West Solar Farm: Central Area (Worton Park shown in central western area of the map)

6.2 Potential hydrological effects and impacts on Worton Park

Any increase in surface water runoff from the area earmarked for the Solar Farm would potentially increase flood risk to the Worton Park site, especially the main site access road and the residential properties located either side of the access road.

Of particular concern would be any localised increased runoff that flows off the field immediately to the northeast of the site access. During periods of heavy rain, surface water is known to pond in the southwest of this field (see **Figure 10**), ultimately running off into the ordinary watercourse described in **Section 4.1**, which contributes to the surface water flood risk to the Worton Park access road, Yarnton Road, and immediate surrounding areas (**Figure 11**).

Agricultural land drainage is known to discharge from this field into the ordinary watercourse to the east of the Thames Water access road. During times of significant rainfall this ditch is known to flow at

capacity, meaning that these drainage features would be surcharged and unable to discharge effectively into the watercourse.

Any increase in localised runoff from the Solar Farm development could potentially reducing the lag time of the runoff flowing into the land drainage systems and ultimately, the ordinary watercourse. This would mean that the flood risk to Yarnton Road and the Worton Park access is potentially increased.

Whilst some preliminary environmental documents are available on the Botley West Solar Farm website, there is currently no specific mention of this land parcel, or indication that this area has been fully investigated with respect to the known flood risk history to the land itself, the Yarnton Road, or Worton Park access, as documented herein. However, it is noted that all development proposals are required to meet the requirements of the National Planning Policy Framework (NPPF) which fundamentally requires the applicant to demonstrate that there is no off-site increase in flood risk as a result of the proposals. The Lead Local Flood Authority (LLFA) is responsible for reviewing the proposals, particularly in relation to drainage arrangements, and should raise an objection if they are not satisfied that there is no off-site impact.

Figure 10: Field northeast of site access showing surface water ponding

[redacted]
Abbey Park, Humber Road, Coventry CV3 4AQ UK
Tel [redacted]
Email: [redacted]

Figure 11: Field northeast of site showing flooding onto Yarnton Road caused by surcharging culvert and highway drainage

Figure 12: Ordinary watercourse immediately east of Thames Water access road

7. Recommendations and Conclusions

This report has been produced to investigate the flood risk to the Worton Park site, both in terms of the current baseline flood risk situation, and potential future effects of the proposed Botley West Solar Farm project.

[redacted]
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Whilst the theoretical flood risks to the majority of the Worton Park site are assessed as low, recent flooding has been observed to the main Worton Park site access road and the residential properties located close to this access. This flooding is occurring as a result of the ordinary watercourse to the north surcharging two culverts directly north of the site access underneath the Thames Water access road and Yarnton Road.

In order to further investigate the cause of this flooding, a full CCTV and condition survey should be undertaken of these culverts, together with a review of the current maintenance programme(s) for the sections of open watercourse channel and culverts in the vicinity of the Yarnton Road junction. This should ideally involve both the Highway Authority and Thames Water as the likely landowners and responsible authorities. This would help to identify any defects / blockages that may be causing the culverts to surcharge and would confirm the existing drainage arrangements.

In terms of future flood risk to the area caused by the proposed Botley West Solar Farm development, and specifically the area proposed for the large parcel of land to the northeast of the junction, any localised increased in runoff, or alteration to land drainage patterns could potentially serve to exacerbate the existing flood risk situation, potentially impacting the Worton Park access road and adjacent residential properties.

Whilst some preliminary environmental documentation is available on the Botley West Solar Farm website, there is currently no specific mention of this land parcel, or indication that this specific area has been fully investigated with respect to the known flood risk history to the land itself, the Yarnton Road, or Worton Park site access road. It is noted, however, that under the National Planning Policy Framework, the proposals should not be given consent if there is any potential increase in flood risk off-site.

It is therefore recommended that the Worton Park Estate Management Team engage fully with the Highways Authority, Thames Water and other upstream landowners to ensure that all potential flood risk effects are fully understood and appropriate mitigation implemented through all phases of solar farm development including construction, operational and decommissioning phases.

Additionally, it is recommended that the Worton Park Estate Management Team continue to monitor the information submitted as part of the planning application and / or consult the LLFA specifically regarding the solar development to obtain comfort that the proposals have been considered in the light of the NPPF requirements on drainage and localised flooding issues affecting the site.

Yours faithfully

For RSK Land and Development Engineering Limited

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APPENDIX A – ENVIONMENT AGENCY DATA

Product 4 (Detailed Flood Risk) for Worton Park, Oxfordshire, OX29 4SU
Our Ref: THM335904

Product 4 is designed for developers where Flood Risk Standing Advice FRA (Flood Risk Assessment) Guidance Note 3 Applies. This is:

i) "all applications in Flood Zone 3, other than non-domestic extensions less than 250 sq metres; and all domestic extensions", and
ii) "all applications with a site area greater than 1 ha" in Flood Zone 2.

Product 4 includes the following information:

Ordnance Survey 1:25k colour raster base mapping;
Flood Zone 2 and Flood Zone 3;
Relevant model node locations and unique identifiers (for cross referencing to the water levels, depths and flows table);
Model extents showing *defended* scenarios;
FRA site boundary (where a suitable GIS layer is supplied);
Flood defence locations (where available/relevant) and unique identifiers; (supplied separately)
Flood Map flood storage areas (where available/relevant);
Historic flood events outlines (where available/relevant, not the Historic Flood Map) and unique identifiers;

Statutory (Sealed) Main River (where available within map extents);

A table showing:

i) Model node X/Y coordinate locations, unique identifiers, and levels and flows for *defended* scenarios.
ii) Flood defence locations unique identifiers and attributes; (supplied seperately)
iii) Historic flood events outlines unique identifiers and attributes; and
iv) Local flood history data (where available/relevant).

Please note:

If you will be carrying out computer modelling as part of your Flood Risk Assessment, please request our guidance which sets out the requirements and best practice for computer river modelling.

This information is based on that currently available as of the date of this letter. You may feel it is appropriate to contact our office at regular intervals, to check whether any amendments/ improvements have been made. Should you re-contact us after a period of time, please quote the above reference in order to help us deal with your query.

This information is provided subject to the enclosed notice which you should read.

This letter is not a Flood Risk Assessment. The information supplied can be used to form part of your Flood Risk Assessment. Further advice and guidance regarding Flood Risk Assessments can be found on our website at:

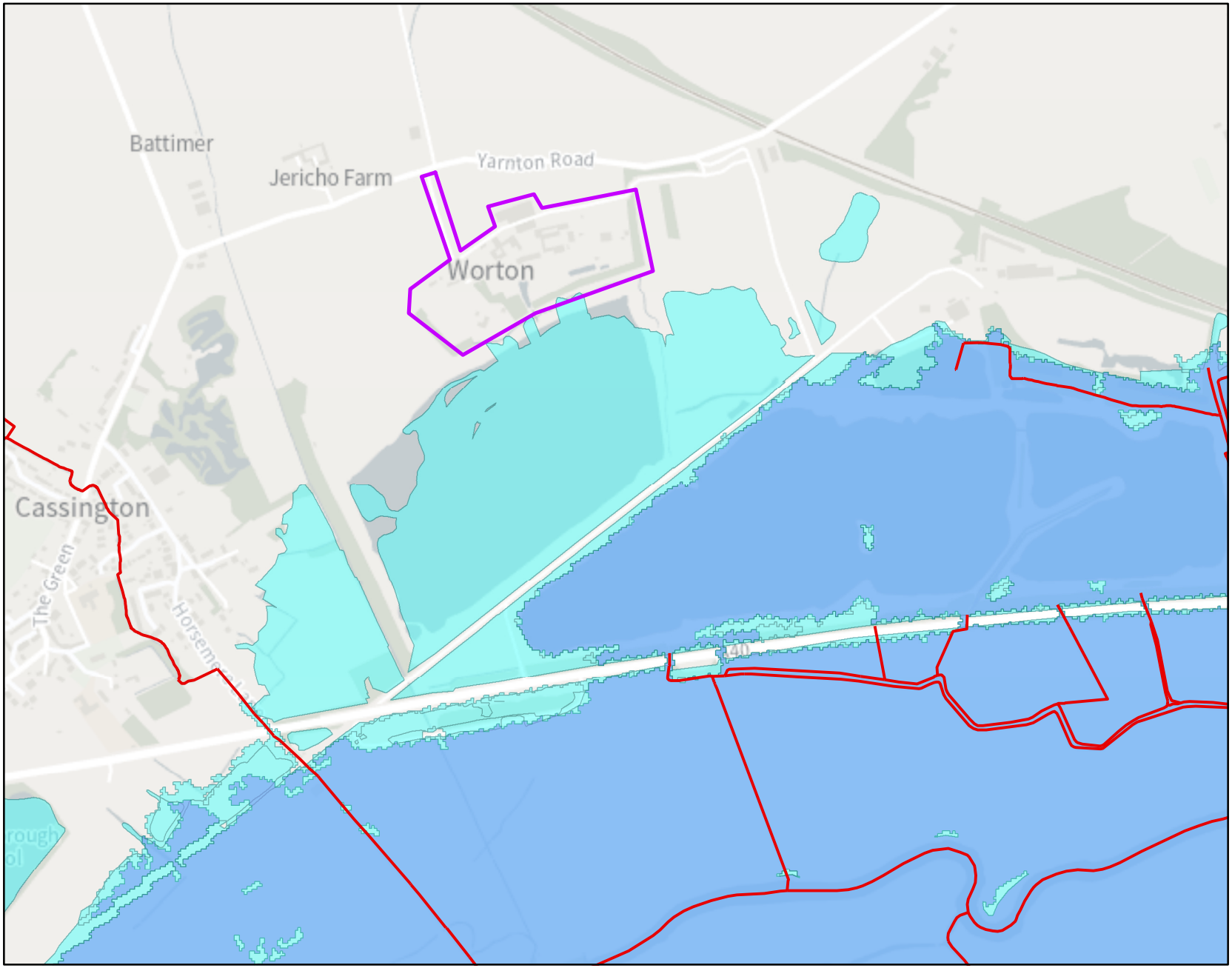
https://www.gov.uk/guidance/flood-risk-assessment-local-planning-authorities

If you would like advice from us regarding your development proposals you can complete our pre application enquiry form which can be found at:

https://www.gov.uk/government/publications/pre-planning-application-enquiry-form-preliminary-opinion

Red Kite House, Howbery Park, Wallingford, Oxon OX10 8BD
Customer services line: 08708 506 506
Email: enquiries_THM@environment-agency.gov.uk

Flood Map for Planning centred on Worton Park, Oxfordshire, OX29 4SU
Created on 15/12/2023 REF: THM335904



Environment Agency

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Legend

- Worton Park, Oxfordshire, OX29 4SU
- Main River
- Flood Map - Flood defences
- Flood Map - Flood Storage Areas
- Flooding from rivers or sea (FZ3)
- Extent of extreme flood (FZ2)

Flooding from rivers or sea without defences (Flood Zone 3) shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

The Extent of an extreme flood (Flood Zone 2) shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Defence information

THM335904

Defence Location:	No defences and NOT on Main River
Description:	This location is not on Main River and we do not hold defence information for this area. There may be an ordinary watercourse nearby which could affect the site. Please contact your local authority for further details.

Model information

Model: Thames (Eynsham to Sandford) 2018 + 2022 (Climate Change data only)

Description: The information provided is from the Oxford Flood Alleviation Scheme mapping completed in March 2018, and re-run in 2022 to obtain Climate Change runs in keeping with the new Climate Change allowances published in June 2021 for this catchment area. The project included updating the existing (2014) hydraulic model to support development of the outline FAS design. The study was carried out using 1D-2D modelling software (Flood modeller-Tuflow).

Model design runs:
1 in 2/ 50% AEP; 1 in 5 / 20% AEP; 1 in 10/ 10% AEP; 1 in 20 / 5% AEP; 1 in 50/ 2% AEP; 1 in 75 / 1.3% AEP; 1 in 100 / 1% AEP, 1 in 100+11% / 1% + 11% AEP with climate change; 1 in 100+13% / 1% + 13% AEP with climate change; 1 in 100+30% / 1% + 30% AEP with climate change; 1 in 100+82% / 1% + 82% AEP with climate change; 1 in 200/ 0.5% AEP and 1 in 1000 / 0.1% AEP.

Mapped outputs:
1 in 2/ 50% AEP; 1 in 5 / 20% AEP; 1 in 10/ 10% AEP; 1 in 20 / 5% AEP; 1 in 50/ 2% AEP; 1 in 75 / 1.3% AEP; 1 in 100 / 1% AEP, 1 in 100+11% / 1% + 11% AEP with climate change; 1 in 100+13% / 1% + 13% AEP with climate change; 1 in 100+30% / 1% + 30% AEP with climate change; 1 in 100+82% / 1% + 82% AEP with climate change; 1 in 200/ 0.5% AEP and 1 in 1000 / 0.1% AEP.

Modelled in-channel flood flows and levels

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The modelled flood levels and flows for the closest most appropriate model node points for your site that are within the river channel are provided below:

				Flood Levels (mAOD)							
Node label	Model	Easting	Northing	20% AEP	5% AEP	1% AEP	1% AEP (+11% increase in flows)	1% AEP (+13% increase in flows)	1% AEP (+30% increase in flows)	1% AEP (+82% increase in flows)	0.1% AEP
061_00_2018_03_50.05	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	446242	209967	59.88	59.99	60.11	60.16	60.17	60.25	60.47	60.29
061_00_2018_03_50.039	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	446701	210135	59.76	59.86	59.95	59.99	60.00	60.06	60.26	60.09
061_00_2018_03_50.032	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447034	210189	59.67	59.76	59.84	59.88	59.88	59.94	60.12	59.97
061_00_2018_03_50.024U	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447183	210131	59.57	59.64	59.70	59.73	59.74	59.78	59.95	59.81
061_00_2018_03_47m.083B	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447144	210074	59.57	59.64	59.71	59.75	59.76	59.81	59.99	59.84
061_00_2018_03_50.024D	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447185	210103	59.57	59.64	59.70	59.73	59.74	59.78	59.95	59.81
061_00_2018_03_50.018	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447301	210138	59.53	59.60	59.67	59.70	59.70	59.75	59.92	59.78
061_00_2018_03_50.014	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447474	210199	59.49	59.56	59.62	59.65	59.66	59.70	59.86	59.73
061_00_2018_03_50.008	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447757	210314	59.43	59.52	59.58	59.62	59.62	59.67	59.85	59.70
061_00_2018_03_50c.032A	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447890	210436	59.38	59.46	59.52	59.55	59.55	59.60	59.79	59.63

				Flood Flows (m3/s)							
Node label	Model	Easting	Northing	20% AEP	5% AEP	1% AEP	1% AEP (+11% increase in flows)	1% AEP (+13% increase in flows)	1% AEP (+30% increase in flows)	1% AEP (+82% increase in flows)	0.1% AEP
061_00_2018_03_50.05	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	446242	209967	107.49	110.55	111.53	114.23	114.82	119.96	137.58	122.83
061_00_2018_03_50.039	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	446701	210135	81.96	90.50	102.36	109.21	110.32	119.43	142.22	123.62
061_00_2018_03_50.032	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447034	210189	89.83	98.63	108.69	114.07	115.13	123.10	144.16	126.84
061_00_2018_03_50.024U	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447183	210131	95.96	108.19	119.80	124.90	125.85	134.20	156.79	138.50
061_00_2018_03_47m.083B	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447144	210074	8.50	8.49	8.70	8.78	8.78	8.83	9.14	8.89
061_00_2018_03_50.024D	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447185	210103	95.94	110.43	124.87	131.36	132.52	142.63	170.59	147.97
061_00_2018_03_50.018	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447301	210138	92.84	103.77	113.44	117.62	118.28	124.66	144.39	128.46
061_00_2018_03_50.014	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447474	210199	82.33	89.26	98.44	102.69	103.31	109.34	129.31	112.99
061_00_2018_03_50.008	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447757	210314	75.37	75.91	76.25	76.76	76.87	77.50	80.72	78.35
061_00_2018_03_50c.032A	Thames (Eynsham to Sandford) 2018 + 2022 (CC data only)	447890	210436	7.96	7.99	8.15	8.21	8.24	8.36	8.88	8.46

Note:

Due to changes in guidance on the allowances for climate change, the percentage increase in river flows above should no longer to be used for development design purposes. The data included in this Product can be used for interpolation of levels as part of an intermediate level assessment.

For further advice on the new allowances please visit
https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Modelled floodplain flood levels

THM335904

The modelled flood levels for the closest most appropriate model grid cells for your site are provided below:

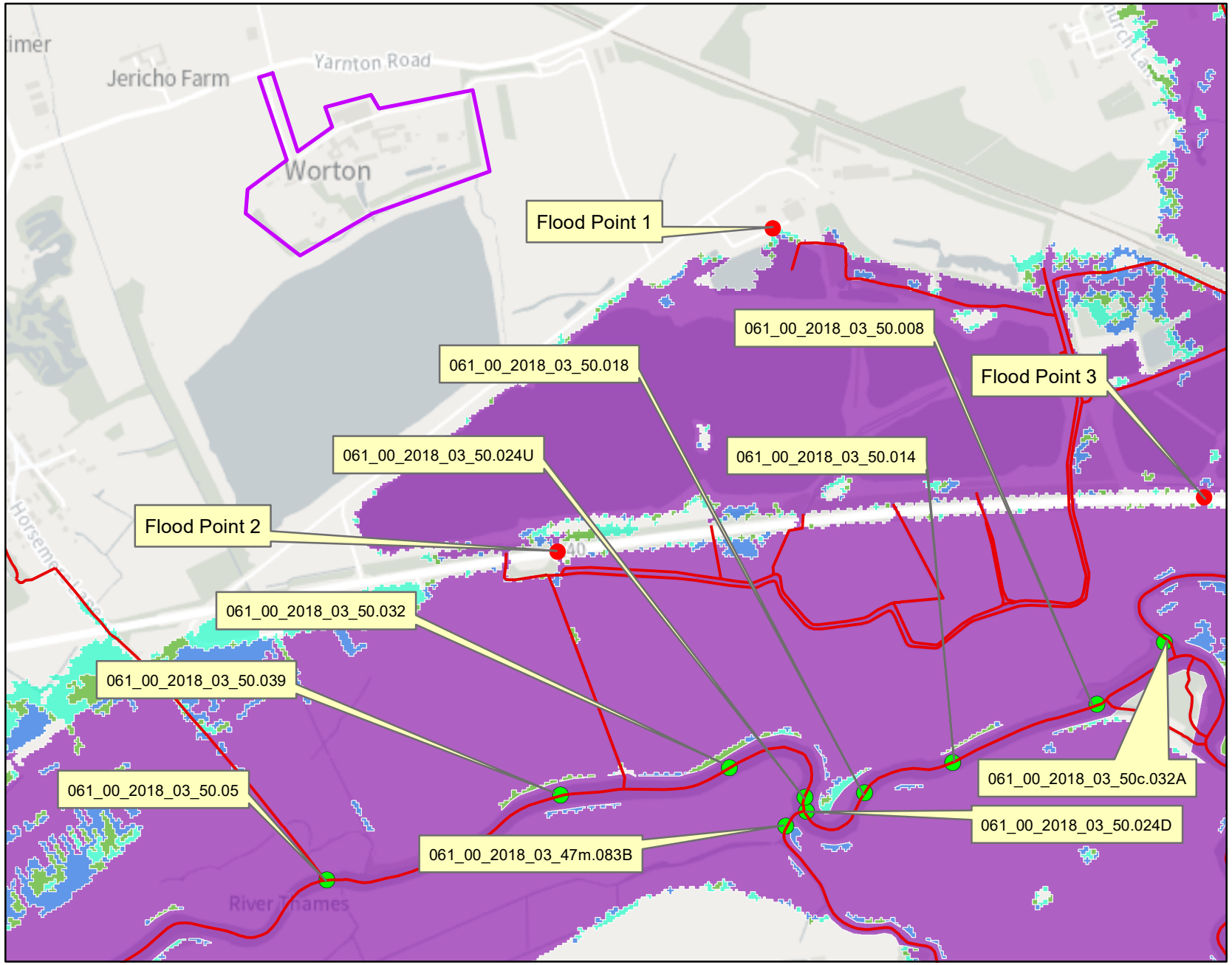
				flood levels (mAOD)							
2D grid cell reference	Model	Easting	Northing	20% AEP	5% AEP	1% AEP	1% AEP (+11% increase in flows)	1% AEP (+13% increase in flows)	1% AEP (+30% increase in flows)	1% AEP (+82% increase in flows)	0.1% AEP
Flood Point 1	Thames (Eynsham to Sandford) 2018 + 2022 (Climate Change data only)	447119	211251	59.49	59.55	59.61	59.64	59.65	59.69	59.83	59.71
Flood Point 2	Thames (Eynsham to Sandford) 2018 + 2022 (Climate Change data only)	446696	210614	59.57	59.70	59.82	59.87	59.88	59.94	60.06	59.97
Flood Point 3	Thames (Eynsham to Sandford) 2018 + 2022 (Climate Change data only)	447966	210721	59.47	59.52	59.57	59.59	59.59	59.63	59.79	59.65

This flood model has represented the floodplain as a grid.
The flood water levels have been calculated for each grid cell.

Note:
Due to changes in guidance on the allowances for climate change, the percentage increase in river flows above should no longer to be used for development design purposes. The data included in this Product can be used for interpolation of levels as part of an intermediate level assessment.

For further advice on the new allowances please visit
https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances

Detailed FRA Map centred on Worton Park, Oxfordshire, OX29 4SU
Created on 15/12/2023 REF: THM335904



Environment Agency

Kilometres

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Legend

- Main River
- Worton Park, Oxfordshire, OX29 4SU
- Model Nodes
- 20% AEP Flood Outline
- 5% AEP Flood Outline
- 1% AEP Flood Outline
- 0.1% AEP Flood Outline

AEP = Annual Exceedance Probability
The probability of a flood of a particular magnitude, or greater, occuring in any given year

Where available climate change extents have been calculated with an additional flow added to an AEP event. An example of how this is written is 1%+20% AEP.

Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Detailed FRA Map centred on Worton Park, Oxfordshire, OX29 4SU
Created on 15/12/2023 REF: THM335904

Environment Agency

Kilometres

0 0.3 0.6

Legend

- Main River
- Worton Park, Oxfordshire, OX29 4SU
- Model Nodes
- 1%+11% CC AEP Flood Outline
- 1%+13% CC AEP Flood Outline
- 1%+30% CC AEP Flood Outline
- 1%+82% CC AEP Flood Outline
- 0.1% AEP Flood Outline

AEP = Annual Exceedance Probability
The probability of a flood of a particular magnitude, or greater, occuring in any given year

Where available climate change extents have been calculated with an additional flow added to an AEP event. An example of how this is written is 1%+20% AEP.

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Historic flood data

THM335904

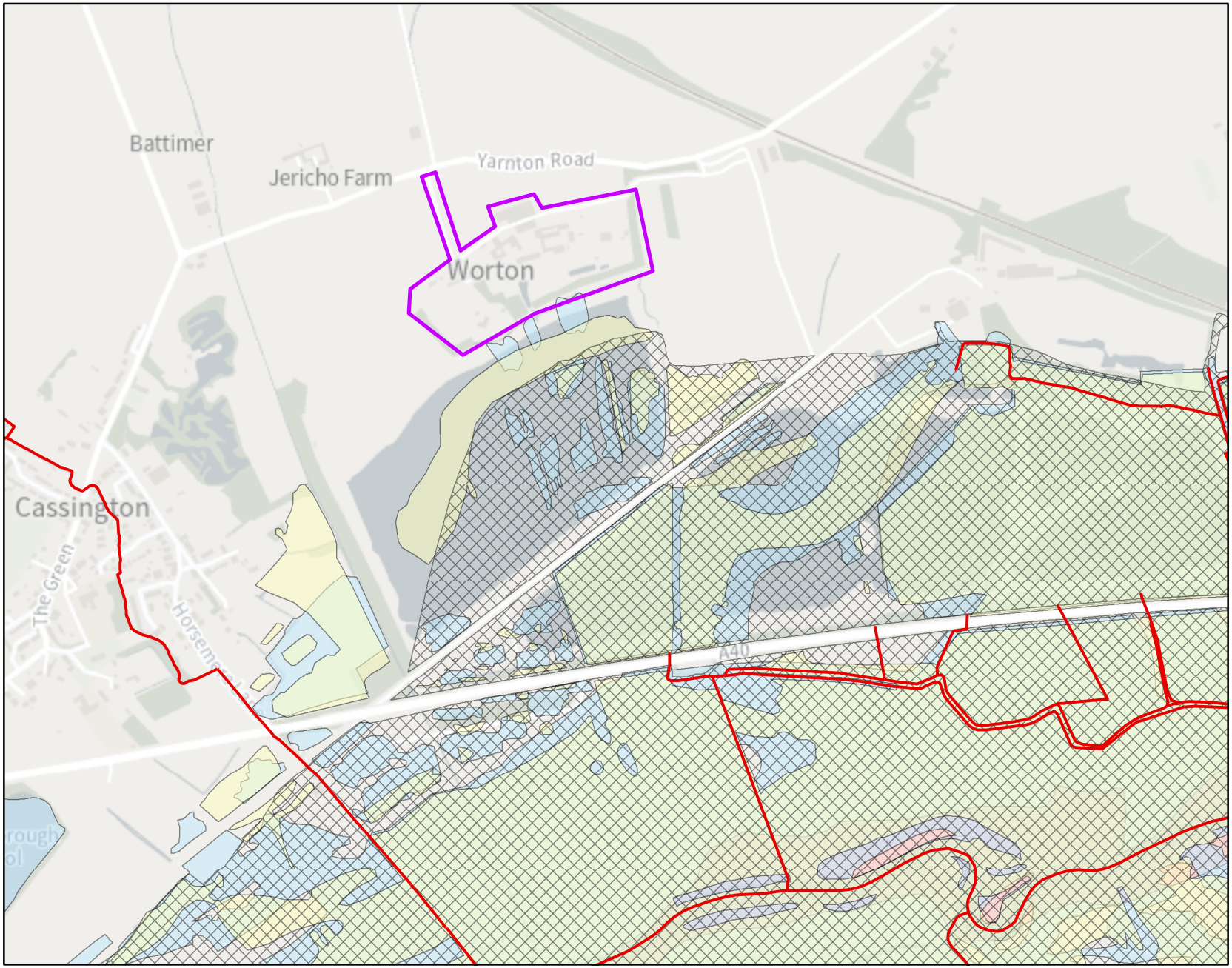
Our records show that the area of your site has been affected by flooding.
Information on the floods that have affected your site is provided in the table below:

Flood Event Code	Flood Event Name	Start Date	End Date	Source of Flooding	Cause of Flooding
EA0619790200177	06FebruaryWinter1979	01/01/1979	12/12/1979	other	local drainage/surface water

Please note the Environment Agency maps flooding to land not individual properties. Floodplain extents are an indication of the geographical extent of a historic flood. They do not provide information regarding levels of individual properties, nor do they imply that a property has flooded internally.

Start and End Dates shown above may represent a wider range where the exact dates are not available.

Historic Flood Map centred on Worton Park, Oxfordshire, OX29 4SU
Created on 15/12/2023 REF: THM335904



Environment Agency

Kilometres

0 0.3 0.6

Legend

- Main River
- Worton Park, Oxfordshire, OX29 4SU

year

- 1947
- 1977
- 1979
- 1992

Flooding from rivers or sea without defences (Flood Zone 3) shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

The Extent of an extreme flood (Flood Zone 2) shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

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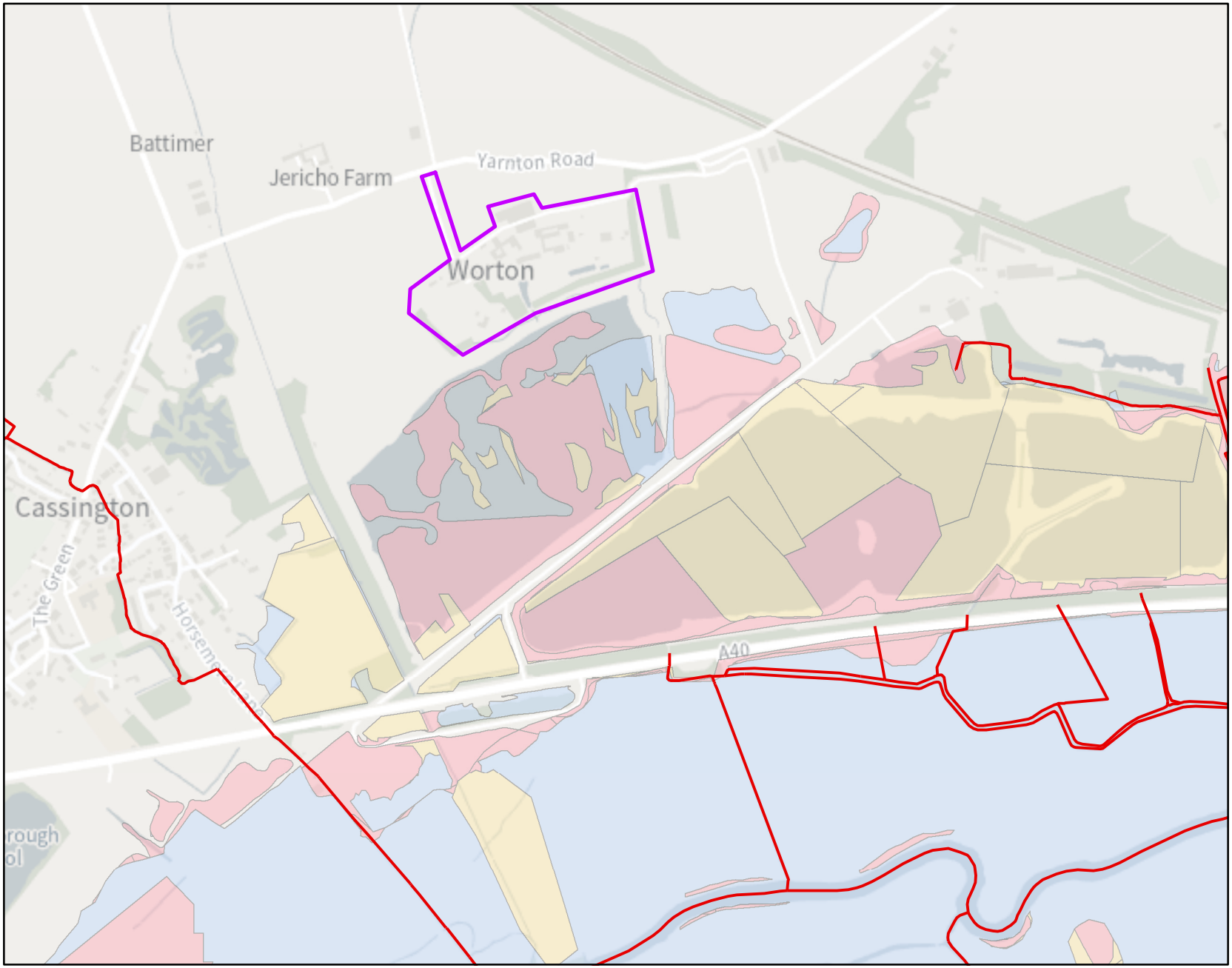
Historic Flood Map centred on Worton Park, Oxfordshire, OX29 4SU
Created on 15/12/2023 REF: THM335904



Environment Agency

Kilometres

0 0.3 0.6

Legend

- Main River
- Worton Park, Oxfordshire, OX29 4SU

year

- 2000
- 2002/3
- 2007

Flooding from rivers or sea without defences (Flood Zone 3) shows the area that could be affected by flooding:
- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

The Extent of an extreme flood (Flood Zone 2) shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.

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